

The noise preceding the hail storm resembled that produced by the moving of a railway train.

Fort Davis: one of the severest rain and hail storms ever experienced in this vicinity occurred on the 25th. The storm began at 12.40 p. m. and continued for forty minutes. The hail stones varied in size from that of a hickory nut to five inches in circumference, and fell with such force as to perforate roofs of corrugated iron and tin. After the storm there were counted in the tin roof of the building in which the Signal office is located, seventy-nine holes, one inch square. Damage amounting to \$5,000 was caused at this place. The storm came from the northeast and passed off the southwest.

Virginia.—Marion, Smyth county: a thunder storm occurred on the afternoon of the 19th, which was accompanied by hail measuring from one-fourth to one-half inch in diameter. It is reported that at points several miles south the hail storm was unusually severe, the hail stones being several inches in circumference.

Wytheville, Wythe county: on the afternoon of the 19th a violent wind and hail storm occurred. The hailstones were one inch in diameter and caused much damage to window glass.

Wisconsin.—Sussex, Waukesha county: a severe hail storm passed south of Waukesha at about noon of the 5th, its path being about two miles in width. The storm was of about ten minutes duration, the hail covering the ground to a depth of two inches.

Hail storms of less violence were reported from the different districts on the following dates:

New England.—7th, 8th, 10th, 11th, 16th, 17th, 20th.

Middle Atlantic states.—5th, 9th, 11th, 15th, 16th, 19th, 23d, 26th, 27th.

South Atlantic states.—14th, 19th, 25th, 27th, 28th.

Western Gulf states.—3d, 5th, 16th, 20th, 21st, 24th, 26th.

Rio Grande valley.—7th.

Tennessee.—2d, 3d.

Ohio valley.—4th, 5th, 18th, 19th, 26th, 27th.

Lower lake region.—1st, 6th, 9th, 11th, 15th, 16th, 27th.

Upper lake region.—1st.

Upper Mississippi valley.—5th, 12th, 17th, 18th, 22d, 31st.

Missouri valley.—4th, 5th, 12th, 17th, 18th, 19th, 21st, 31st.

Northern slope.—15th, 26th, 28th.

Middle slope.—4th, 11th, 12th, 15th, 16th, 17th, 20th to 23d, 26th to 31st.

Southern slope.—2d, 20th, 25th, 26th, 27th.

Southern plateau.—2d, 15th, 18th, 19th, 20th.

Middle plateau.—9th, 14th, 15th, 21st, 27th.

Northern plateau.—3d.

North Pacific coast region.—3d, 5th, 9th.

Table of rainy and cloudy days, relative humidity, and dew-point for May, 1884.

Districts.	Rainy days.	Cloudy days.	Rel. humidity. °	Dew-point.
	From 9 to 17	From 3 to 12	Percentages.	
New England.....	From 9 to 17	From 3 to 12	From 65.1 to 84.5	From 38.8 to 48.1
Middle Atlantic states.....	" 7 " 14	" 4 " 8	" 59.0 " 87.1	" 44.8 " 65.5
South Atlantic states.....	" 5 " 13	" 3 " 7	" 59.4 " 80.6	" 54.7 " 66.3
Florida peninsula.....	" 4 " 8	" 0 " 3	" 69.6 " 72.2	" 67.1 " 69.7
East Gulf states.....	" 8 " 18	" 4 " 10	" 63.0 " 78.0	" 59.7 " 66.3
West Gulf states.....	" 8 " 15	" 4 " 11	" 68.6 " 81.8	" 56.2 " 68.7
Rio Grande valley.....	" 10 " 11	" 2 " 11	" 66.1 " 81.0	" 65.7 " 69.4
Ohio valley.....	" 11 " 15	" 4 " 10	" 62.0 " 65.2	" 47.6 " 57.2
Tennessee.....	" 9 " 12	" 2 " 7	" 95.5 " 66.9	" 53.7 " 55.8
Lower lake region.....	" 10 " 17	" 5 " 12	" 61.3 " 75.0	" 42.9 " 47.8
Upper lake region.....	" 9 " 19	" 5 " 10	" 65.5 " 73.1	" 35.9 " 44.4
Extreme northwest.....	" 2 " 6	" 2 " 7	" 57.9 " 69.3	" 39.0 " 42.6
Upper Mississippi valley.....	" 9 " 16	" 4 " 13	" 59.2 " 69.9	" 42.6 " 55.3
Missouri valley.....	" 10 " 13	" 5 " 8	" 64.3 " 69.4	" 42.9 " 50.5
Northern slope.....	" 6 " 16	" 3 " 10	" 50.4 " 68.8	" 31.7 " 46.4
Middle slope.....	" 10 " 19	" 7 " 9	" 57.5 " 66.9	" 37.2 " 47.1
Southern slope.....	" 5 " 15	" 3 " 5	" 50.9 " 72.5	" 42.0 " 47.1
Southern plateau.....	" 0 " 7	" 1 " 2	" 26.7 " 56.8	" 28.6 " 40.7
Northern plateau.....	" 3 " 11	" 1 " 5	" 55.8 " 65.4	" 42.4 " 48.8
North Pacific coast region.....	" 0 " 10	" 5 " 9	" 63.9 " 81.3	" 45.9 " 47.4
Middle Pacific coast region.....	" 2 " 5	" 3 " 7	" 58.2 " 84.5	" 47.3 " 53.3
South Pacific coast region.....	" 4 " 10	" 3 " 10	" 40.8 " 50.4	" 45.8 " 54.9
Mt. Washington, N. H.....	Eighteen	One	94.2	30.4
Pike's Peak, Colo.....	Twenty-two	Four	88.0	17.4
Salt Lake City, Utah.....	Eight	Six	50.9	38.3

* Relative humidity corrected for altitude.

COTTON REGION REPORTS.

In the table below are given the temperature and rainfall

averages for the several districts for May, 1884, with the means for the same month in the two preceding years:

Temperature and rainfall data for the cotton districts, May.

Districts.	Rainfall.			Temperature.								Extremes for May, 1884.	
	Average for May of two preceding years.	Average for May, 1884.	Departures.	Maximum.			Minimum.						
				Mean for May of two preced- ing years.	Mean for May, 1884.	Departures.	Mean for May of two preced- ing years.	Mean for May, 1884.	Departures.				
New Orleans...	4.76	9.20	+ 4.46	84.6	82.6	- 2.0	62.0	65.0	+ 3.0	99	45		
Savannah.....	3.10	1.76	- 1.34	84.6	88.7	+ 4.1	60.1	65.4	+ 5.3	103	45		
Charleston.....	3.80	2.70	- 1.10	82.4	86.0	+ 3.7	58.0	62.8	+ 4.8	95	40		
Atlanta.....	2.45	1.57	- 0.91	79.8	83.9	+ 4.1	54.4	60.5	+ 6.1	97	46		
Wilmington.....	2.42	3.26	+ 0.84	80.8	82.4	+ 1.6	54.0	59.0	+ 5.0	96	38		
Memphis.....	6.08	3.77	- 2.31	79.0	80.5	+ 1.5	55.8	58.2	+ 2.4	93	41		
Galveston.....	3.71	12.20	+ 8.49	85.2	82.9	- 2.3	63.0	61.5	- 1.5	94	43		
Vicksburg.....	4.83	8.87	+ 4.04	82.3	81.9	- 0.4	60.1	62.0	+ 1.9	90	49		
Montgomery.....	2.81	1.32	- 1.49	83.0	86.4	+ 3.4	57.1	60.5	+ 3.4	98	30?		
Augusta.....	2.40	2.55	+ 0.15	82.8	85.6	+ 2.8	58.4	59.8	+ 1.4	100	40		
Little Rock.....	7.64	5.89	- 1.05	80.3	79.4	- 0.9	54.1	58.2	+ 4.1	91	20?		
Mobile.....	3.81	3.87	+ 0.06	84.3	85.6	+ 1.3	58.4	61.5	+ 3.1	98	49		

WINDS.

The most frequent directions of the wind during May, 1884, are shown on chart ii. by arrows flying with the wind. On the Pacific coast the most frequent directions were from the northwest and west; over the northern slope and northern plateau, from northwest to southwest; in the western Gulf states and southern slope, southerly; in the lower Missouri valley, northerly; in the lake region and upper Mississippi valley, variable; on the Atlantic coast, from the south and southwest.

HIGH WINDS.

On the summit of Pike's Peak, Colorado, the highest wind velocity was 70, n., 5th; other dates on which velocities of fifty or more miles per hour were reported are as follows: 4th, 6th, 14th, 17th, 30th.

On the summit of Mount Washington, New Hampshire, the highest wind velocities were: 100, w., 2d; 96, nw., 3d; 78, nw., 4th; other dates on which velocities of fifty or more miles per hour were recorded are as follows: 1st, 5th, 7th, 8th, 10th, 14th, 16th, 17th, 18th, 19th, 20th, 21st, 23d, 24th, 25th.

Other stations reporting velocities of fifty or more miles per hour are as follows:

Cape Mendocino, California, 62, se., 25th.

Rochester, New York, 60, w., 2d.

Buffalo, New York, 58, sw., 2d.

Fort Canby, Washington Territory, 50, s., 4th.

Dodge City, Kansas, 52, w., 5th.

TOTAL MOVEMENTS OF THE AIR.

[In miles.]

In the following table are given the stations reporting the largest and smallest total movements of the air in each of the various districts:

Districts.	Stations reporting largest.	Miles.	Stations reporting smallest.	Miles.
New England.....	Block Island, R. I.....	10,607	Eastport, Maine.....	5,552
Middle Atlantic states.....	Sandy Hook, N. J.....	11,246	Lynchburg, Va.....	2,574
South Atlantic states.....	Fort Macon, N. C.....	9,384	Charlotte, N. C.....	3,875
Florida peninsula.....	Cedar Keys.....	7,006	Key West.....	5,897
Eastern Gulf states.....	Pensacola, Fla.....	5,344	Montgomery.....	3,801
Western Gulf states.....	Indianola, Tex.....	9,343	Fort Smith, Ark.....	3,625
Rio Grande valley.....	Brownsville, Tex.....	6,362	Rio Grande, Tex.....	5,968
Tennessee.....	Nashville.....	5,028	Chattanooga.....	4,250
Ohio valley.....	Columbus, Ohio.....	5,417	Indianapolis, Ind.....	4,275
Lower lake region.....	Sandusky, Ohio.....	9,738	Toledo, Ohio.....	1,890
Upper lake region.....	Milwaukee, Wis.....	8,093	Marquette, Mich.....	5,345
Extreme northwest.....	Moorhead, Minn.....	7,603	Bismarck, Dak.....	5,131
Upper Mississippi valley.....	Davenport, Iowa.....	6,190	Des Moines, Iowa.....	2,886
Missouri valley.....	Huron, Dakota.....	7,215	Leavenworth, Kans.....	4,193
Northern slope.....	Cheyenne, Wyoming.....	7,749	Deadwood, Dak.....	3,856
Middle slope.....	Dodge City, Kan.....	9,423	Denver, Colo.....	4,964
Southern slope.....	Fort Stockton, Tex.....	8,179	Fort Davis, Tex.....	4,662
Southern plateau.....	Fort Grant, Arizona.....	5,658	El Paso, Tex.....	3,498
Northern plateau.....	Dayton, Wash. T.....	4,535	Lewiston, Idaho.....	1,003
North Pacific coast region.....	Fort Canby, Wash. T.....	6,717	Roseburg, Oregon.....	1,866
Middle Pacific coast region.....	Cape Mendocino, Cal.....	12,607	Red Bluff, Cal.....	5,004
South Pacific coast region.....	San Diego, Cal.....	4,275	Yuma, Ariz.....	3,942